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ABSTRACT

This annual report of the Engineering Manpower Commission summarizes the general operations and activities of the organization during 1969. The commission views its functions as three-fold, namely (1) promoting effective utilization of engineers in the national interest, (2) developing and evaluating information on the supply, demand, and compensation of engineers, and (3) establishing public understanding of engineering and its importance to the national economy. In pursuit of these objectives, the Commission has, in 1969, conducted and published several surveys on engineering manpower, salaries and income of engineers and technicians, and on the demand for engineers and technicians. Bulletins and articles by Commission personnel are listed. The program for 1970 is presented. The report concludes with a list of Commissioners, staff, and contributors to the Commission. (LC)

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1969

ANNUAL REPORT

and

PROGRAM for 1970

ENGINEERING MANPOWER COMMISSION
of Engineers Joint Council

345 East 47th Street
New York, New York 10017

March 1970

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Acknowledgments

This report was prepared by John D. Alden, Executive Secretary of the Engineering Manpower Commission and typed by Sue Lewis.

Introduction

The Engineering Manpower Commission was organized in 1951 as part of Engineers Joint Council to serve as a focus for action on national technological manpower problems. Commissioners are appointed because of their professional standing and experience in education, industry, and government.

The Commission's program is carried out through the collection, analysis, and publication of significant data on engineering manpower, cooperation with government agencies to assure the utilization of critical manpower in the national interest, and the development of programs and policies designed to acquaint the public with the importance of engineering to the national welfare.

The Engineering Manpower Commission maintains a close working liaison with its counterpart among the scientific societies, the Scientific Manpower Commission. In areas of mutual concern, joint programs are carried out.

Both the Engineering and the Scientific Manpower Commissions are supported in substantial part by contributions from industry, obtained by a joint annual campaign for funds.

General Operations

The Engineering Manpower Commission's planned budget for 1969 was $102,300. During the course of the year additional projects and adjustments increased this by $12,000. As of the year's end, expenditures totaled $116,000, exceeding income by about 1 %. The charts below show the major income and expense categories in the EMC program.

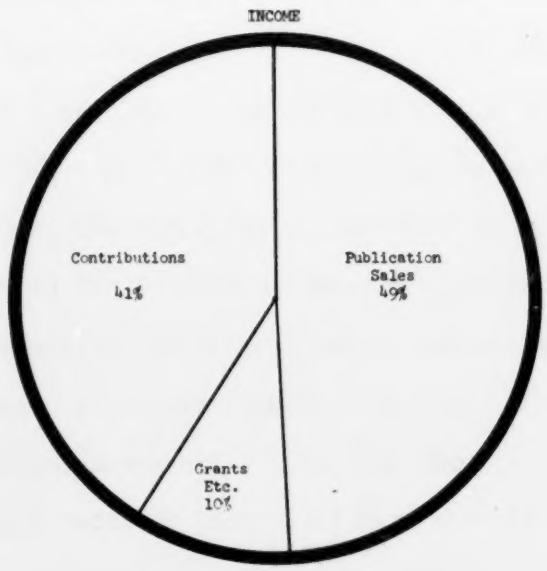
As in previous years the increased level of EMC publications and services was maintained without additional permanent staff. The present staff consists of John D. Alden, Executive Secretary; Carol Iceland, Assistant for Surveys and Special Projects, and Sue Lewis, Secretary. Part of Mr. Alden's time is devoted to other programs of Engineers Joint Council in his capacity of Director of Manpower Activities. Temporary help was used in 1969 to handle special work loads.

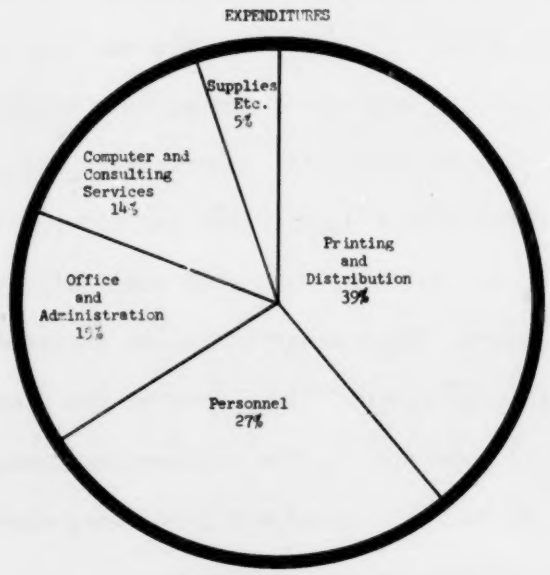
The rapidly rising cost of practically all supplies and services is a matter of general knowledge. This has been of particular concern to EMC because its sources of income have tended to be rather inflexible. The number of industrial contributors has remained nearly steady, while the total amount contributed has never returned to the levels reached from 1952 to 1956. Sales of publications have also been fairly steady in numbers, thus necessitating an increase in price in order to defray publication costs. Since most of the Commission's activities are conducted as a service to the engineering community and the general public, it is unrealistic to expect that these should be self-supporting in terms of income derived from them.

In order to overcome the limitations imposed on the Commission

ENGINEERING MANPOWER COMMISSION

DISTRIBUTION OF INCOME AND EXPENDITURES





activities by anticipated levels of income, the Chairman of EMC appointed a Finar.cial Development Committee under Malcolm Pirnie, Jr., to work on the problem. This committee launched a special campaign to increase the number and amount of contributions, with some success. The increased contribution income has enabled us to keep up with inflationary costs but has not been sufficient to support any new projects as yet.

The full Commission met five times in 1969, and the Executive Committee met during the intervening months. The January meeting was held concurrently with the EJC General Assembly meeting at the Hotel Gotham. EMC Chairman Donald E. Irwin and Advisor C.S. Dargusch addressed the General Assembly on the commission's objectives and activities.

Dr. Albert H. Moseman of the Agricultural Development Council was guest speaker at the March meeting, on the subject of challenges and opportunities for engineering in the developing countries of the world.

In May EMC hosted the annual joint meeting of the Engineering and Scientific Manpower Commissions on the theme "The Relevance of Engineering and Science to the Moral Issues of a Modern Technological Society." Four guest speakers -- Roy B. Helfgott, Professor of Industrial Relations at Newark College of Engineering; George M. Newcombe, a senior student in engineering; Thomas F. Malone, Senior Vice President and Director of Research, Travelers Insurance Company; and Sol Wallin, President of the New York Urban Coalition -- addressed this provocative topic from four different viewpoints. Thirty outside guests were in-

vited to share this program with the Commission in furtherance of its objective of stimulating wider participation of the engineering community in EMC activities. The texts of the four talks were printed in a special report and distributed widely.

The September meeting was devoted to a presentation of the Engineering Concepts Curriculum Project by Dr. E.J. Piel. Fifteen guests with particular interests in education were present for the talk.

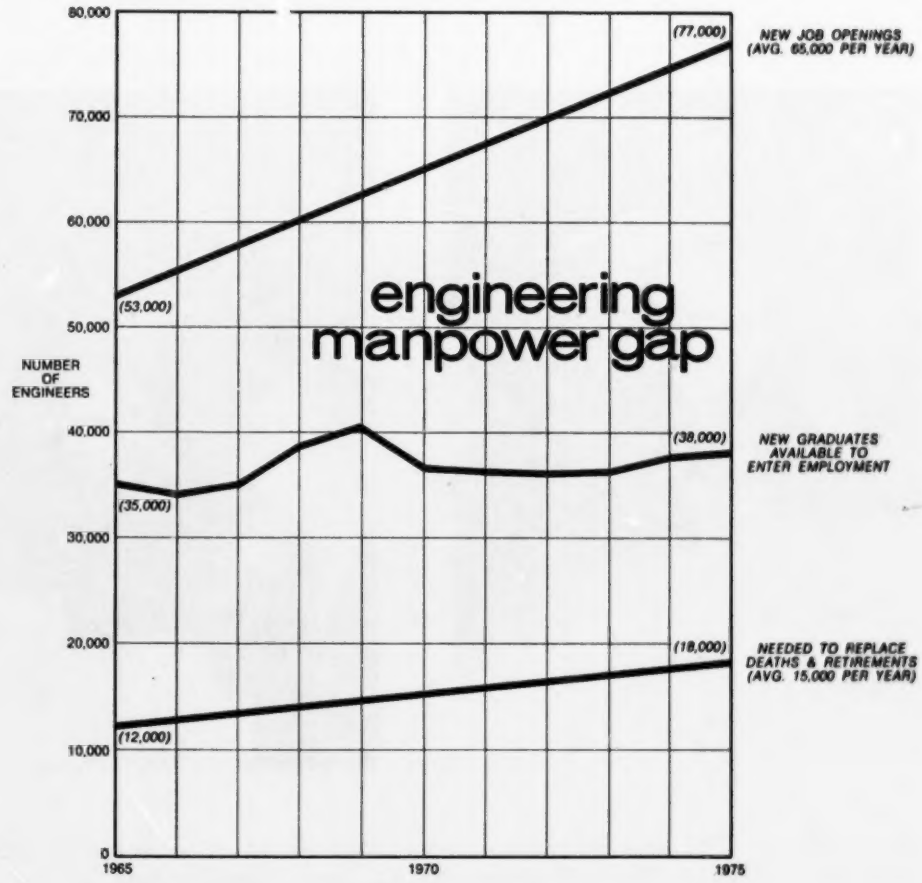
At the December meeting, Dr. Leo L. Beranek spoke on the subject of "Engineering Education from Cradle to Grave", drawing on his extensive experience as a teacher, practicing engineer, and employer for some original observations on the relationship between the educational process and the effectiveness of engineering graduates in industry.

Six new Commissioners were appointed in 1969 as part of a continuing effort to introduce fresh viewpoints into EMC from all major areas of engineering.

In December William Hazell was appointed Chairman and Walter Carleton Vice-Chairman of the Engineering Manpower Commission for 1970.

Among other achievements of Commissioners, Mr. Hazell was chosen to become the next President of Newark College of Engineering, Walter Hartung was elected Mayor of Tenafly, New Jersey, and Arthur A, Burr was elected as a Vice-President of the American Society for Engineering Education.

Above left: Dr. Leo Beranek, guest speaker at the December 1969 EMC meeting. Right: Vice-Chairman Hazell and Commissioner Strong enjoying the conversation. Below: Commissioners Dixon and Roush. Candid Camera photos by Donald B. Keyes.



Scarcity characterizes engineering manpower as industry enters the 1970's. *The growing gap between the number of engineers required by industry and the engineers available is both significant and ominous.*

THE ENGINEERING MANPOWER GAP

The shortage of trained engineers at the municipal level already has been termed a "catastrophe" by some city officials. Positions for engineers in many companies remain vacant. More than 900 employers surveyed by Engineers Joint Council last year reported that they fell twenty-five percent short of their planned recruiting goals for new engineering graduates.

While individual companies feel the direct result of the engineering manpower gap, the situation becomes even more critical when viewed at the level of international technological competition. More than 200,000 engineers and scientists graduated in Japan in 1966. Russian technical schools graduate an estimated 138,000 engineers annually. The impact of this emphasis on engineering education abroad already may be seen in the increasing competition for both domestic and Free-World technical markets.

No dramatic increase in engineering enrollments appears to be developing on the nation's college campuses. Engineering undergraduate enrollments lagged thirty-eight percent behind the general increase in college enrollments since 1958. There are actually no more students enrolled in the nation's engineering schools this year than there were 20 years ago.

Promoting the Effective Utilization of Engineers in the National Interest

1. Selective Service and Military.

Engineers, educators, and employers reported continuing problems in connection with the draft. EMC used its surveys to obtain factual information on the harmful effects of the abrupt elimination of graduate student deferments, on the basis of which it made firm recommendations to federal officers aimed at easing the problem. On October 2, 1969 the National Security Council advised the Director of Selective Service that the induction of graduate students should be postponed to allow them to complete the full academic year.

At year's end Congress amended the Selective Service legislation to permit the President to introduce a lottery system of induction. Although EMC continues to oppose a draft lottery in principle because it fails to provide for the adequate utilization of technical skills, the Commission is working with the appropriate government officials to carry out the objectives of the law with minimum disruption to the national interest. A number of activities were initiated in December that will be carried out under the 1970 EMC program.

The EMC Subscription Service on Selective Service and Military Manpower Developments was extended through June 1970. During 1969 nineteen releases were sent to more than 300 subscribers, plus a large complimentary distribution to industrial supporters, engineering societies, and the press.

EMC joined with the Scientific Manpower Commission in carrying out a cooperative program with the Department of Defense aimed at identi-

fying draftees with scientific and engineering backgrounds so that efforts can be made to place them in positions making some use of their knowledge. EMC is also working with the Department of Defense on a study of the utilization of engineers in all three military services.

2. Employment of Older Engineers.

Acting on the basis of suggestions that early retirement was creating a supply of potentially useful but underutilized older engineers, EMC established an ad hoc committee under Harold E. Roush to look into the matter. After reviewing responses from over 480 engineers the committee developed an initial list of potential fields of employment for older engineers. Jobs that appeared particularly appropriate included technical service work, teaching, and international volunteer programs. Work on this project is being continued by the staff.

3. Contacts with Other Organizations.

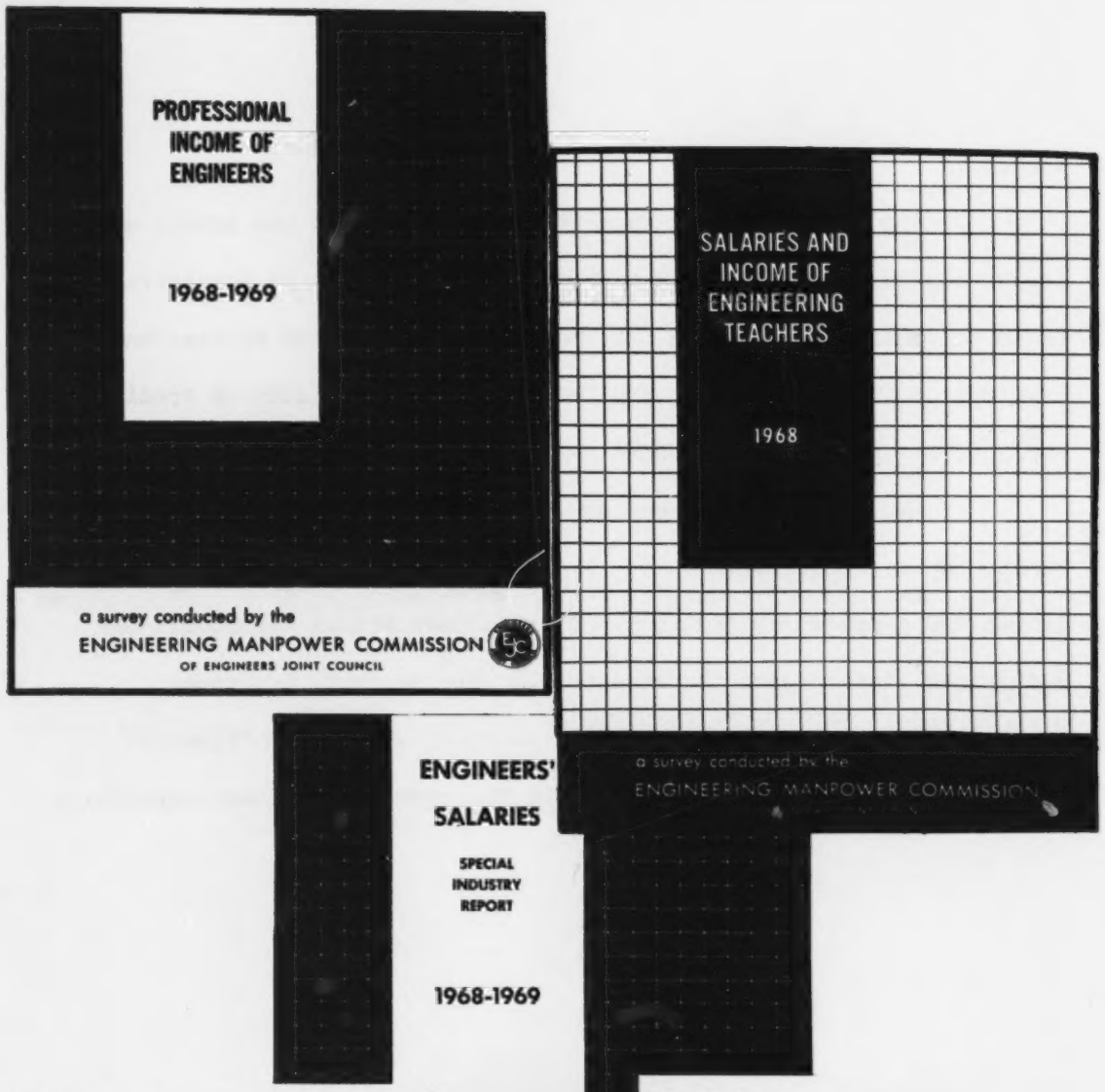
Liaison with the Technical Association of the Pulp and Paper Industry manpower committee was undertaken by Commissioner Walter Bloomquist. Other Commissioners were active in keeping their own societies informed of EMC's activities.

The Executive Secretary met twice with scientific society and government representatives under the auspices of the National Research Council to consider ways of improving the collection and use of manpower statistics. In April he addressed the Western Michigan Chapters of the American Institute of Industrial Engineers and the American Institute of Plant Engineers, and in December he attended the IBM seminar on the role of computers in our increasingly technological

society.

A number of people from EMC participated in the annual meeting of the American Society for Engineering Education at Pennsylvania State University in June and the Engineers' Council for Professional Development in Washington during October. Other contacts on special subjects are mentioned elsewhere in this report.

EMC made certain records from its previous surveys available to the Harvard Economic Research Project for a study of economic growth and manpower utilization. Commissioner Arthur Dershowitz has maintained liaison with the director of this project, Professor Richard B. Freeman. The results of the study will be published in a book The Labor Market for High-Level Manpower and in other reports.


PROFESSIONAL INCOME OF ENGINEERS
1968-1969
a survey conducted by the
ENGINEERING MANPOWER COMMISSION
OF ENGINEERS JOINT COUNCIL
SALARIES AND INCOME OF ENGINEERING TEACHERS
1968
a survey conducted by the
ENGINEERING MANPOWER COMMISSION
ENGINEERS'
SALARIES
SPECIAL INDUSTRY REPORT
1968-1969
by the
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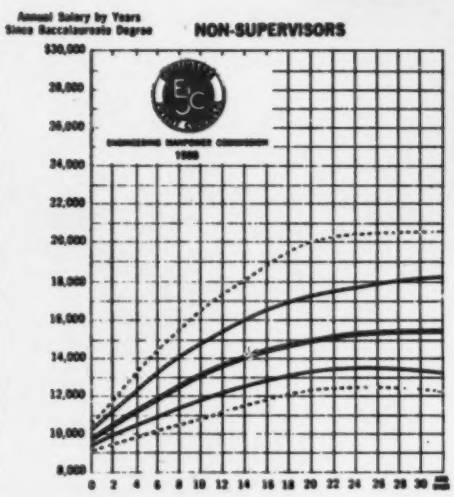
OF ENGINEERS JOINT COUNC


Annual Salary by Years Since Baccalaureate Degree
NON-SUPERVISORS
$30,000
28,000
26,000
24,000
22,000
20,000
18,000
16,000
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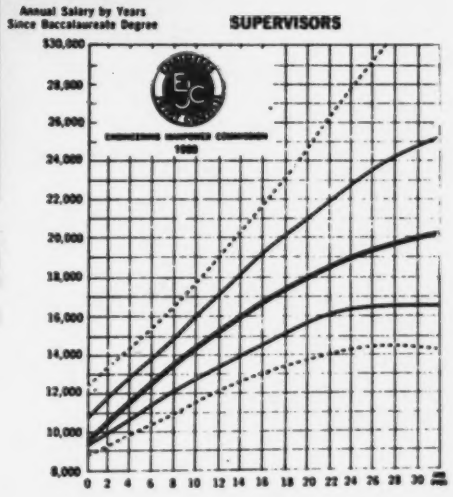
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Developing and Evaluating Information on the Supply, Demand, and Compensation of Engineers

The Commission accomplished the following survey work in its areas of interest:

1. Engineering Salaries.

The survey conducted late in 1968 was analyzed and released in the form of an article in Engineer for May-June 1969, the report Professional Income of Engineers -1968-69 published in April, and Engineers' Salaries - Special Industry Report published in May.

2. Salaries and Income of Engineering Teachers - 1968.

This report was completed during 1969 and published in December under a grant from the National Science Foundation.

3. Engineering and Technician Enrollments.

The results of the survey for Fall 1968 were published in June, and a summary was included in Engineering Education for that month. A new survey was started in October to collect 1969 enrollment data.

4. Engineering and Technician Degrees.

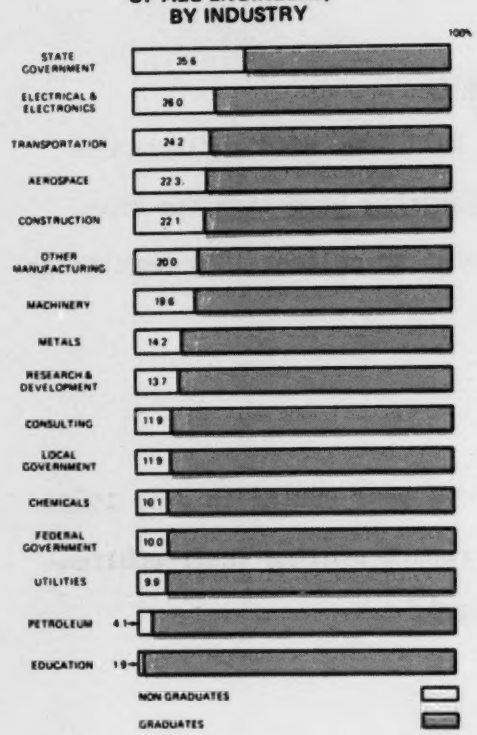
Degrees awarded during the school year ending in June 1969 were released in a limited distribution report pending their publication in Engineering Education early in 1970.

DEMAND

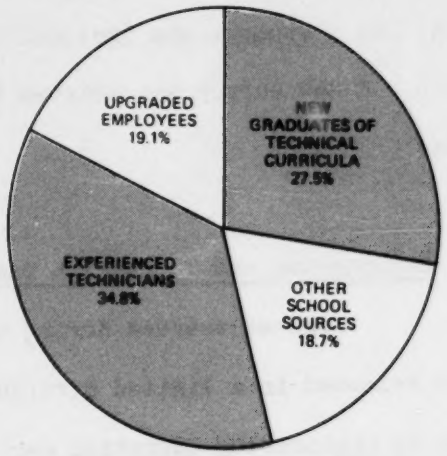
FOR ENGINEERS AND TECHNICIANS – 1968

a survey conducted by the
ENGINEERING MANPOWER COMMISSION
OF ENGINEERS JOINT COUNCIL
IN COOPERATION WITH
THE NATIONAL INDUSTRIAL CONFERENCE BOARD

NON-GRADUATES AS A PERCENTAGE OF ALL ENGINEERS, BY INDUSTRY



DISTRIBUTION OF NEW TECHNICIAN HIRES BY EDUCATION OR EXPERIENCE LEVEL


UPGRADED EMPLOYEES 19.1%
NEW GRADUATES OF TECHNICAL CURRICULA 27.5%
EXPERIENCED TECHNICIANS 34.8%
OTHER SCHOOL SOURCES 18.7%

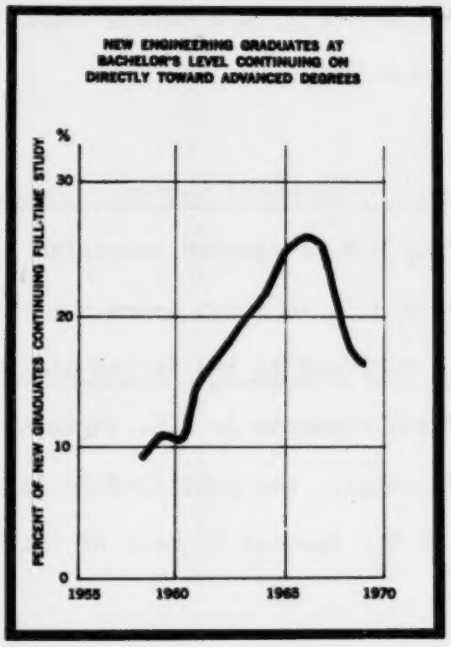
ENGINEERING and TECHNICIAN ENROLLMENTS
FALL 1968

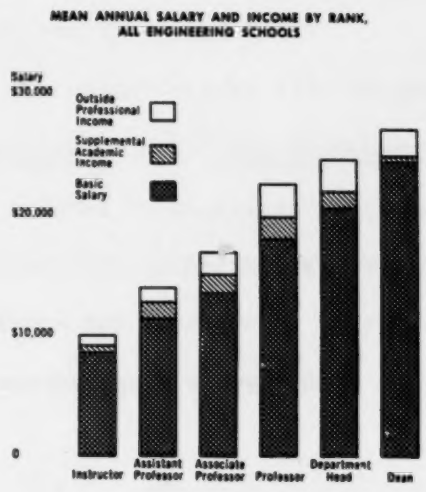
ENGINEERING MANPOWER COMMISSION
OF
ENGINEERS JOINT COUNCIL

Full-Time Engineering Enrollments

Fall 1968 Compared With 1967

	1967	1968	% Change
Freshman	77,551	77,484	-0.1
Sophomore	56,975	55,615	-2.4
Junior	50,483	50,274	-0.4
Senior	47,551	50,736	+6.7
Fifth-Year	4,589	5,133	+11.8
Master's Degree	34,231	24,469	-28.5
Doctor's Degree	15,376	15,768	+2.5
Total Graduate Students	49,607	40,237	-18.9





5. Demand for Engineers and Technicians.

Results of the 1968 survey were published in December 1969. A questionnaire was developed and tested in the fall of 1969 for use in the follow-up survey to be conducted in 1970 in cooperation with the National Industrial Conference Board.

6. Prospects of Engineering and Technology Graduates

A survey of the 1969 graduating class of engineers and technicians was completed and reported in the form of two Engineering Manpower Bulletins. This survey documented a continuing decline in the proportion of new graduates continuing on toward master's or doctor's degrees, and showed a high level of demand for new graduates during 1969. The technician report also included data on starting salaries which has not been readily available previously.

7. Importance of Immigrants in the U.S. Technical Manpower Supply

An ad hoc committee headed by M.H. Klegerman completed a study of this subject which was published in February under the title Foreign-Born and Educated Engineering Manpower in the United States. A special tabulation of foreign graduate students in U.S. engineering schools, by curriculum and country of origin, was published in January. The latter information was compiled at the special request of the U.S. Office of Emergency Preparedness.

Establishing Public Understanding of Engineering and Its Importance to the National Economy

1. Engineering Manpower Bulletins.

These bulletins are distributed on a complimentary basis to about 3,500 individuals and organizations. The following were issued during 1969:

Bulletin 12, "The Engineer as a Chief R & D Executive", in January, was based on data prepared specially for EMC by John S. Wilson, Vice President of the firm of Heidrick and Struggles.

Bulletin 13, " Engineering Manpower in Canada", published in March, was written by guest author Andrew C. Gross from research conducted for a doctoral thesis.

Bulletin 14, "Prospects of Engineering Graduates - 1969", reported the results of EMC's placement survey and was released in November.

Bulletin 15, "Prospects of Technology Graduates - 1969", a companion bulletin to number 14, was issued in December.

2. Scientific - Engineering - Technical Manpower Comments.

This periodical is published by the Scientific Manpower Commission on behalf of both EMC and SMC. Eleven regular issues and two index numbers were distributed during 1969 to a circulation list of about 1,500.

3. Articles in Public Media.

The following major articles by the Executive Secretary were

ENGINEERING MANPOWER

BULLETIN NUMBER 12

January, 1969

This is the twelfth in a series of Bulletins designed for leaders in industry, government, and education whose responsibilities include an awareness of developments affecting engineering and technical manpower. In this issue we present an analysis of the engineer as a top executive in research and development, based on data prepared specially for the Engineering Manpower Commission through the courtesy of John S. Wilson, Vice President of the management consulting and executive selection firm of Haldrich and Scruggins, plus additional pertinent material.

John D. Alden, Executive Secretary
Engineering Manpower Commission

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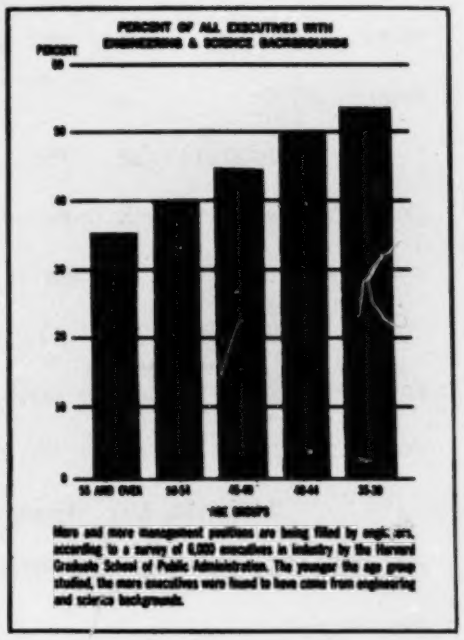
THE ENGINEER AS A CHIEF R&D EXECUTIVE



More and more management positions are being filled by engineers, according to a survey of 6,000 executives in industry by the Harvard Graduate School of Public Administration. The younger the age group studied, the more executives were found to have come from engineering and science backgrounds.

ENGINEERING MANPOWER

BULLETIN NUMBER 13

March, 1969

This is the thirteenth in a series of Bulletins designed for leaders in industry, government and education whose responsibility includes an awareness of developments related to engineering manpower. In this issue, guest author Andrew C. Gross of Cleveland State University discusses certain key findings of his doctoral thesis which deals with Canadian engineers and presents selected comparisons between Canadian and U.S. engineers.

John D. Alden, Executive Secretary
Engineering Manpower Commission of Engineers Joint Council

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ENGINEERING MANPOWER IN CANADA

YEARS OF EXPERIENCE VS. MEDIAN SALARY OF ENGINEERS, CANADA AND U.S.A., 1964 AND 1966

YEAR	COUNTRY	VARIABLE	SELECTED LEVELS					
1964	CANADA	Years of experience	1	4	10	14	16	20
		Annual salary	$5,760	$6,900	$8,520	$9,920	$11,760	$14,280
	U.S.A.	Years since graduation	1	4	10	15		20
		Annual salary	$7,625	$8,950	$11,425	$12,800		$13,900
1966	CANADA	Years of experience	1	4	10	14	16	19
		Annual salary	$6,770	$7,860	$9,480	$11,050	$12,995	$15,600
	U.S.A.	Years since graduation	1	4	10	15		20
		Annual salary	$8,550	$9,750	$12,500	$13,750		$15,050

Source: Report on Salaries, 1964 and 1966 (Ottawa: Canadian Council of Professional Engineers)
Professional Income of Engineers, 1964 and 1966-1967 (New York: Engineers Joint Council)

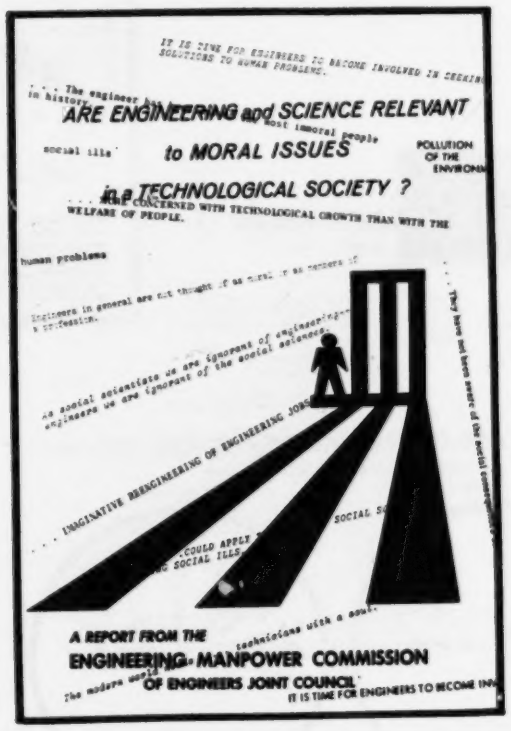
published during 1969:

"Engineering and Technician Enrollments, Fall 1968" in Journal of Engineering Education, June 1969.

"Grads - 1969", in Graphic Science, July 1969.

"Are You Really Underpaid?" in Engineer, May-June 1969.

"Trends in Salaries of Engineering Teachers", in Engineering Education, December 1969.


ARE ENGINEERING and SCIENCE RELEVANT
to MORAL ISSUES
in a TECHNOLOGICAL SOCIETY ?
A REPORT FROM THE
ENGINEERING MANPOWER COMMISSION
OF ENGINEERS JOINT COUNCIL

ENGINEERING MANPOWER

...LLETIN NUMBER 14

...November 1969

This is the fourteenth in a series of Bulletins designed for leaders in industry, government, and education whose responsibilities include an awareness of developments affecting engineering and technical manpower. In this issue we present the key findings of the Engineering Manpower Commission survey of the 1969 class of engineering graduates, and an analysis of important trends disclosed by a series of such surveys conducted since 1958.

JOHN D. ALDEN, *Executive Secretary*
Engineering Manpower Commission
of Engineers Joint Council

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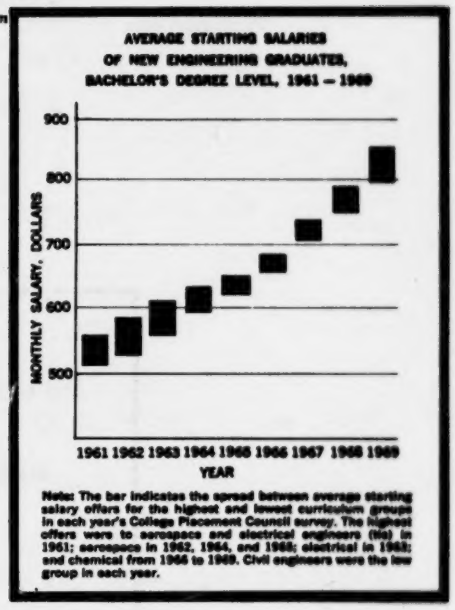
THE PROSPECTS OF ENGINEERING GRADUATES, 1969

The 1969 Placement Survey.

PLACEMENT STATUS OF ENGINEERING GRADUATES



Note: The bar indicates the spread between average starting salary offers for the highest and lowest curriculum groups in each year's College Placement Council survey. The highest offers were to aerospace and electrical engineers (tie) in 1961; aerospace in 1962, 1964, and 1965; electrical in 1963; and chemical from 1966 to 1969. Civil engineers were the low group in each year.

ENGINEERING MANPOWER

...LLETIN NUMBER 15

December, 1969

This is the fifteenth in a series of Bulletins designed for leaders in industry, government, and education whose responsibilities include an awareness of developments affecting engineering and technical manpower. In this issue we present the results of the Engineering Manpower Commission survey of 1969 technology graduates at both the associate degree and bachelor's degree levels. This is a companion Bulletin to Number 14, which presented similar information on engineering graduates.

JOHN D. ALDEN, *Executive Secretary*
Engineering Manpower Commission
of Engineers Joint Council

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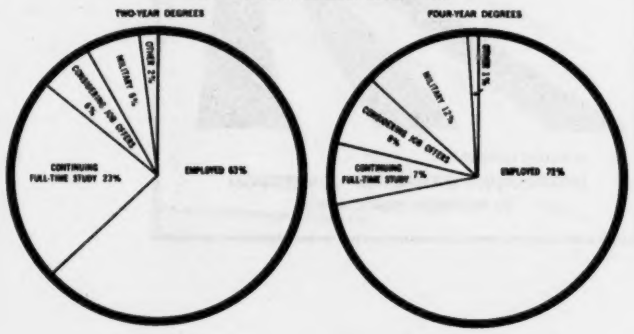
THE PROSPECTS OF TECHNOLOGY GRADUATES, 1969

PLACEMENT STATUS OF TECHNOLOGY GRADUATES – 1969



In addition, articles based on EMC data, reviews of EMC publications, and announcements of EMC activities appeared in the following journals:

Engineer
U.S. News and World Report
Chemical Engineering Progress
IEEE Spectrum
Product Engineering
Machine Design
Mechanical Engineering
Civil Engineering
Experimental Mechanics
Professional Engineer
Recruiting Trends
The Chemist
E D N
Design News
Chemical and Engineering News
Telephone Engineer and Management
The New York Times
The Military Engineer
Agricultural Engineering
The Tool and Manufacturing Engineer
Automation
Technical Education News
Naval Engineers Journal
Products Finishing
Personnel Management - Policies and Practices
Professional Engineer in Industry Newsletter
Production
Report on Questionnaires
Science Trends
Consulting Engineer
Manpower
Dateline in Science
The Professional Engineer and Engineering Digest
Personnel Journal
Monthly Labor Review
Science
Ebony
Under Sea Technology
Vocational Advisory Service Information Bulletin
PMS Executive Newsletter
Technology Review
BNA Bulletin to Management
Research/Development
Journal of the Audio Engineering Society
Mining Engineering
Washington Science Trends
Journal of College Placement
Comparative and International Education Society Newsletter
The Chronicle of Higher Education
Occupational Education Bulletin
The Integrator
Graphic Science
Clemson World
Engineering Education

4. Programs to Improve National Understanding of Manpower Needs.

The Commission worked closely with the National Industrial Conference Board's Technician Manpower Shortage campaign through 1969. Walter Hartung is EMC's representative on the steering committee for this project. NICB published its report The Technical Manpower Shortage: How Acute? based in part on EMC data. The two organizations also continued their cooperative study of the demand for engineers and technicians.

EMC engaged the services of Harold Azine, an experienced technical writer, to prepare an outline for its proposed series of television programs dramatizing the work of engineers. Although a special solicitation of industry was made to fund a continuation of this effort, contributions were less than the total required. The television program project, under a committee headed by Richard B. Laning, is currently inactive pending further efforts to obtain funding.

5. Career Guidance Information

The Commission strengthened its cooperative relationship with the Engineers' Council for Professional Development by jointly publishing the twelfth edition of Sources of Engineering Career Information. Fifteen thousand of these booklets were printed in 1969.

In July another joint publication was issued, Sources of Engineering Technology Career Information, with a first edition of 20,000 copies. This booklet was specially prepared to answer inquiries received in response to the NICB technician campaign described previously.

Both guidance booklets give basic information on job opportunities, salaries, and educational requirements, as well as listing sources where further information can be obtained. EMC and ECPD provide this and other guidance material free of charge to counselors, parents, and students. Bulk quantities are provided through ECPD at cost.

EMC also maintains close relationships with the Junior Engineering Technical Society (JETS) and other guidance organizations. Mr. Alden also participated in a panel discussion on guidance coordination

at the annual meeting of the American Institute of Chemical Engineers in Washington last October.

6. Liaison with Government, Civic, Professional, and Educational Groups

Engineering Manpower Commission members and staff worked with many such groups during the year. In addition to contacts already mentioned in connection with other activities, EMC provided information to the National Research Council, the Office of Emergency Preparedness, several Senators and Congressmen, the Scientific Advisor to the President, the Department of Labor, the Department of Health, Education, and Welfare, and numerous other groups.

7. Cooperation with International Groups.

Representatives of engineering societies and manpower planning organizations from Australia, Japan, Canada, and the institute for International Education were among those who visited EMC for information. Mr. Alden was an invited participant in an international conference on the technologist in the mineral industry of the future sponsored by British mining engineering organizations in May, 1969.

GUIDEBOOK

FOR

ENGINEERING NEWCOMERS

TO

THE UNITED STATES OF AMERICA

ENGINEERING
MANPOWER
COMMISSION

Program for 1970

PURPOSE

The Engineering Manpower Commission of Engineers Joint Council is charged with the following responsibility:

> "To engage in studies and analyses of the supply, demand, and utilization of engineering and technical manpower; to make recommendations, conduct programs, and develop reports concerning these aspects of engineering and technical manpower; and to carry on such other programs in the field of manpower as may be authorized by the Board of Directors of EJC."

MANPOWER POLICIES AND OBJECTIVES

1. The Engineering Manpower Commission will continue to identify and evaluate national technical manpower problems and take action as appropriate.

2. EMC will endeavor to increase its influence on overall engineering manpower policies and objectives through its program of meetings, sponsoring or cooperating in seminars, conferences, publications, and workshops on topics of current interest, and encouraging the participation of other members of the engineering community in EMC activities.

3. The Commission will continue to work toward the establishment of appropriate military professional career status for all engineers and scientists in the armed forces. It will support the establishment of programs which will provide for the proper utilization of men of military age having critical skills, in both civilian and military capacities, as the national interest may require.

4. The Commission will continually reexamine and update its positions and activities in the light of changing government policies and overall national developments.

SURVEYS AND REPORTS

1. Salaries of Engineering Technicians - 1969

Publication of this report, based on a survey conducted in late 1969, is planned for early 1970.

2. Annual Report for 1969

Publication is planned in March 1970.

3. Engineering and Technician Enrollments

The report of fall 1969 enrollments is planned for publication in January 1970. Fall enrollments will be surveyed again in September 1970. Conduct of the enrollment survey is contingent on receipt of a grant to underwrite the basic expense of collecting and processing the data.

4. Demand for Engineers and Technicians

In cooperation with the National Industrial Conference Board, a survey of demand over a future period of five years is scheduled to start in January 1970. A report of the results will be published as soon as possible after the data have been collected and analyzed.

5. Engineering and Technology Degrees and Prospects of Graduates

These two surveys are planned to be conducted simultaneously in June. Reports will be published in October and November 1970.

6. Professional Income of Engineers - 1970

This biennial survey will take place in September, with publication of reports scheduled for early 1971.

7. Salaries and Income of Engineering Teachers - 1970

This survey will be conducted in conjunction with the basic engineers' salary survey. Conduct of this survey is contingent on receipt of a grant from the National Science Foundation.

8. Classification, Deferment, and Delay and Employer's Inventory of Critical Manpower

These two handbooks should be revised when the anticipated major changes in the draft take place. Decision on publishing

new editions will be made when the scope of the changes becomes known.

9. Guidebook for Engineering Newcomers to the U.S.

This handbook will have to be reprinted when the present supply is exhausted. At this time it will be updated to incorporate the results of experience with the first edition.

10. New Publications

Two or three special reports based on the work of EMC committees or staff studies may be published as the situation dictates.

Experimental publication of an Engineering Manpower Annual is under consideration. This is envisioned as a summary of key manpower statistics updated each year, plus highlights of significant events affecting the technical manpower picture during the preceding year.

SERVICES

1. Information on Engineering and Technical Manpower.

a. The Commission will undertake to increase the awareness of all components of the engineering community and the general public to important aspects of engineering and technical manpower, by continuing its ongoing activities in this area and seeking new ways to be of service.

b. Where appropriate, EMC meeting activities will be opened to attendance by other members of the engineering community as a means of providing wider dissemination of information.

c. EMC will continue to provide a focus of information for industry, the press, government, and the public on engineering and technical manpower.

d. At least four issues of the Engineering Manpower Bulletin will be published to provide up-to-date information on important facets of the manpower situation.

e. The EMC proposal for a series of TV programs on engineers and their accomplishments will be actively pursued, with a view toward obtaining sponsorship for commercial TV presentation. Funding will be sought from industry, founda-

tions, and government agencies, as appropriate.

f. News releases will be issued on all major activities and publications of the Engineering Manpower Commission.

g. The EMC staff will present talks before professional and industrial groups, and provide articles for technical journals and other publications, to the maximum extent practicable.

h. The EMC staff will continue to submit material to SMC for inclusion in Scientific - Engineering - Technical Manpower Comments.

2. Military Service Information

a. EMC will work with the Department of Defense, the Selective Service System, and other government agencies in an effort to assure the optimum utilization of engineering manpower resources by the armed services.

b. The EMC staff will continue to provide up-to-date information and advice on military service problems of engineers.

c. The subscription service on Selective Service and Military Manpower Developments, which was initiated in 1966, has been extended until June 1970. Continuation of this service will depend on the future military situation.

d. Workshops on Selective Service will be held if there is a need for them because of significant changes in Selective Service legislation, regulations, or procedures during the year.

3. Career Guidance

a. EMC will continue to support engineering career guidance activities under the Engineers' Council for Professional Development.

b. The Commission will assist ECPD in the preparation and distribution of jointly published guidance literature. EMC's primary contribution is the provision of up-to-date and realistic information on all aspects of engineering and technical manpower.

c. EMC will work with organizations involved in guidance in attempting to evaluate the effects of guidance efforts on the supply of technical manpower.

ACTIVITIES CONDUCTED JOINTLY WITH THE SCIENTIFIC MANPOWER COMMISSION

1. As in past years, EMC will carry forward joint programs with the Scientific Manpower Commission aimed at serving the mutual interests of the engineering and scientific communities. The two Commissions will cooperate in monitoring manpower policy developments in Washington, and will coordinate their position statements wherever appropriate.

2. Scientific - Engineering - Technical Manpower Comments will be published by the SMC staff on behalf of both the Engineering and Scientific Manpower Commissions.

3. A joint annual meeting of the two Commissions will be hosted by SMC in 1970.

Betty Vetter, Executive Director of the Scientific Manpower Commission and a regular participant in EMC meetings.

Vita

CHARTER

The Engineering Manpower Commission of Engineers Joint Council is charged with the following responsibility:

> "To engage in studies and analyses of the supply, demand, and utilization of engineering and technical manpower; to make recommendations, conduct programs, and develop reports concerning these aspects of engineering and technical manpower; and to carry on such other programs in the field of manpower as may be authorized by the Board of Directors of EJC."

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Executive Secretary. . . . . John D. Alden

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Assistant to the Executive Secretary . . . . . Carol Iceland

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The Port of New York Authority

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Instrument Society of America
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Society of American Military Engineers
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American Society for Non-Destructive Testing
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Fluid Power Society
Western Society of Engineers
Michigan Engineering Society
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